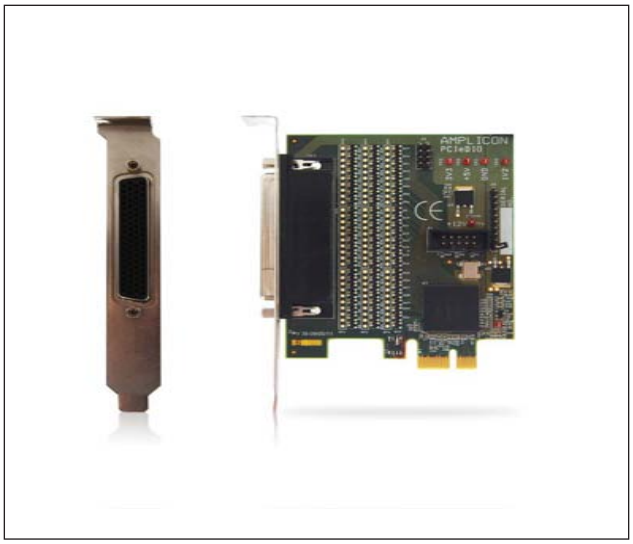
AMPLICON PCIe215



Features

- x1 PCI Express Interface
- 48 lines of TTL compatible digital I/O
- Six 16-bit counter/timers
- PCIe Bus version 2.1 plug and play interface
- Interrupt controlled operation
- External termination panels available
- High density 78-way D connector
- Windows 2000, XP, 2003, Vista & 7 Support
- Drivers for C/C++, VB.NET, Delphi, VEE & LabVIEW

Description

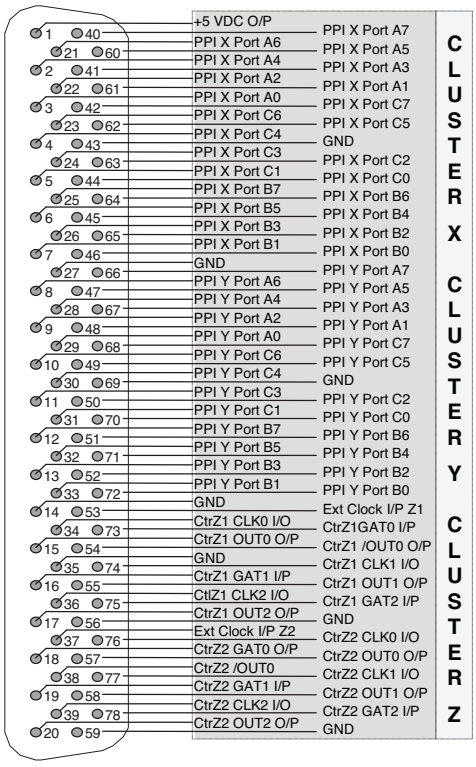
The PCIe215 is a digital I/O boards that provides 48 lines of parallel digital input/output and six 16-bit counter/timers. The board can be used on any PC the supports PCIe bus version 2.1 to monitor and control an external device. The PCIe215 is powered by the 3.3V supply from the host PC and this supply rail is also available for external use via the I/O connector.

The PCIe215 has two 82C55 Programmable Peripheral Interface (PPI) chips, each having three 8-bit ports (A, B and C). Port C can be split into two 4-bit ports. Each port can be configured for inputs or outputs by wiring to the control register of the 82C55.

The PCIe215 has two 82C54 counter timers each with three channels. All timing operations are under the control of a 10MHz crystal clock source. The source is used internally and can be divided down for connection to each of the 82C54's channels. The clock input to the counter/timer can also be configured for an external clock source.

The PCIe215 is supplied with an Amplicon DVD-ROM, this contains all of the software for the PCIe215 card and is doumented in the AMPDIO software manual. The manuals can be accessed when the software is installed from the DVD-ROM.

PCIe215 78-way connector



Sales: +44 (0) 1273 570 220 Admin: +44 (0) 1273 608 331 Fax: +44 (0) 1273 570 215 Website: www.amplicon.com Email: sales@amplicon.com

AMPLICON PCIe215

Specifications

Digital input/output	
Digital I/O	Two 82C55 chips with 24 TTL compatible lines
Digital inputs	Low: -0.3V to +0.8V High: +2.2V to +50V
Digital outputs	Low: +0.4V max at 2.5mA High: +3.0V min at -2.5mA
Interrupt sources	Six interrupt sources available in total, two per 82C55 and one per 82C54
Counter/Timer	
Counter/timer	Two 82C54 counter/timers each with three 16-bit counters
Counter/timer functions	Interrupt control, count down, stopwatch, frequency/ period measurement, frequency generation, square wave output, PWM output and others
Counter outputs	Low output voltage: +0.4V max at +2.5mA. High output voltage: +3.0V min at -2.5mA
Ext. clock/gate input	Low: -0.3 to +0.8V High: +2.2 to +50.0V

General	
Connector	78-way female D-sub
Dimensions	80 x 95mm (Length x Height)
PC interface	PCIe bus version 2.1, 3.3V
Operating temp.	0 to +60°C
Storage temp.	-20 to +70°C
Humidity	5 to 95% RH, non-condensing
Power requirements	3.3Vdc @ 130mA, fully loaded
MTBF	313,951 hours
Compliance	CE, EMC EN55022, EN55024

Accessories and Ordering information

Images are for illustration purposes only

96113263 PCIe215 digital I/O 48 channels and 6 counter timers board
90966333 EX233 termination and distribution panel
90966349 Cable 1m long screened 78 way for use with EX233 panel and 200 series DIO boards
90966373 EX230 input panel with 24 isolated common & contact closure inputs
90966363 EX213 output panel with 24 relays/isolated logic
91014890 ACL-10137-1 MF Screened cable, 37-way male D to female D

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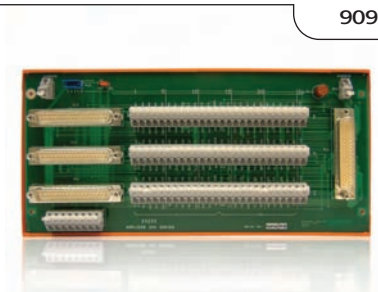

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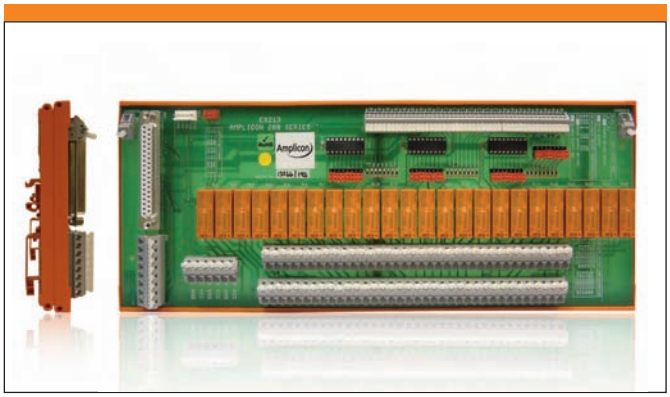
EX200 Series



Features

- DIN rail or bench mounting
- Easy clamp terminals for our PCIe200 series digital I/O boards
- Isolated input protection
- Isolated outputs/ relays
- 'Mix and match' panels to build the connection system for you

Description

The EX200 range of digital termination panels has been developed for connection of signals to the PCIe236 and PCIe215 cards. Three termination panels are available, and may be used in various combinations or individually, depending on whether isolation is required or not.

EX233 termination panel
The EX233 is a termination panel that provides 78 terminals for connection of external signals. A 78-way connector enables connection via an appropriate cable assembly, to the PCIe215 digital Input/output board. It also has three 37-way connectors allowing distribution of input/ output signals, or connection to an isolation panel detailed below.

EX230 isolated input panel
The EX230 is a 24 line interface panel that provides isolation and protection from digital input signals. The EX230 may be connected directly to the PCIe236 digital I/O board (via cable), or to one of the three 37-way connectors on the EX233.

All inputs can be configured on a channel by channel basis. The following jumper selections can be made:

- An opto-isolated input with 2 ranges:
Low range: -5.0 to +1.5V = Low, and +4 to +20V = High.
High range: -15 to +2.0V = low, and +10 to +50V = high.

- Volt free contact closure input which uses the +5V supply onboard to detect a contact closure and like all the other input modes requires no external power.

EX213 relay/ isolated output panel
The EX213 is a 24 line interface panel that provides isolation or higher switching capability for digital outputs. The EX213 may be connected directly to the PCIe236 digital I/O board (via cable), or to one of the three 37-way connectors on the EX233.

There are independent terminal groups for relay and logic outputs and all outputs can be configured on a channel by channel basis. The following jumper selections can be made:

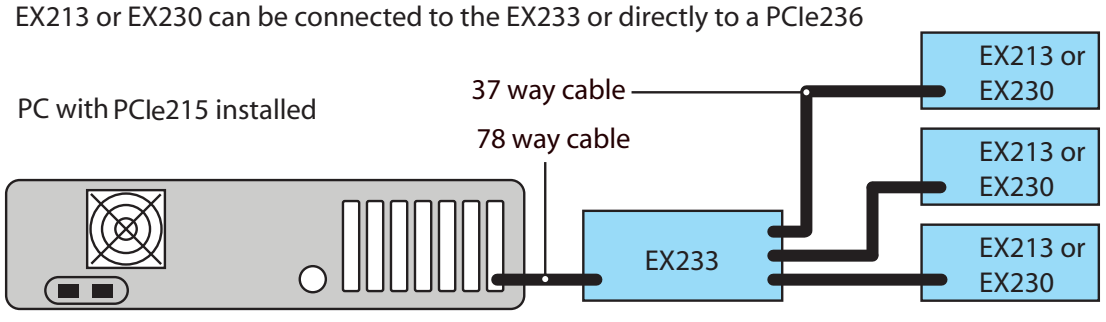
- Isolated relay output with changeover contact. This is rated for 8A at 30Vdc, or 49Vac.

- Isolated High level logic output with source drivers that can source up to 100mA for 90% duty cycle on all 24 lines.

- Non-isolated TTL outputs on port A (8-bits).

The outputs are in groups of 8, each of which may be independently powered by a 24Vdc supply. Alternatively they can share one 24V supply but either way external power is required. EX233 has terminals for introducing a common 24V power supply for the EX213 and EX221.

Schematic diagram



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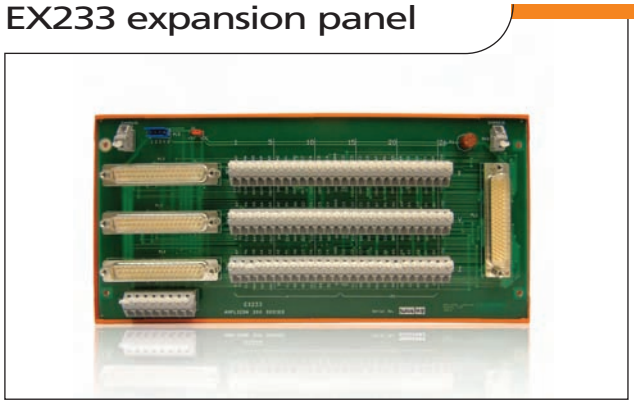
EX200 Series

EX233 expansion panel

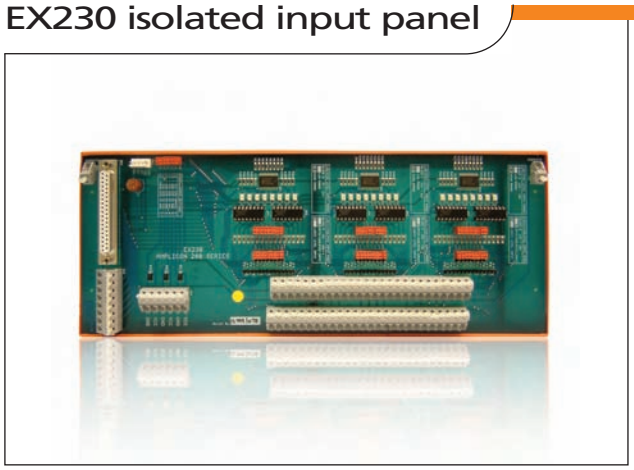


Specifications	
Board interface	78-pin male D-sub
Wiring termination	Spring loaded terminals
Expansion interface	Three 37-pin male D-sub
Dimensions	267 x 126 x 42mm (width x depth x height)
Mounting	DIN rail or bench top

Ordering information

90966333 EX233 termination and distribution panel
90966349 Cable 1m long screened 78 way for use with EX233 panel and 200 series DIO boards
91014890 ACL-10137-1 MF Screened cable, 37-way male D to female D

EX230 isolated input panel

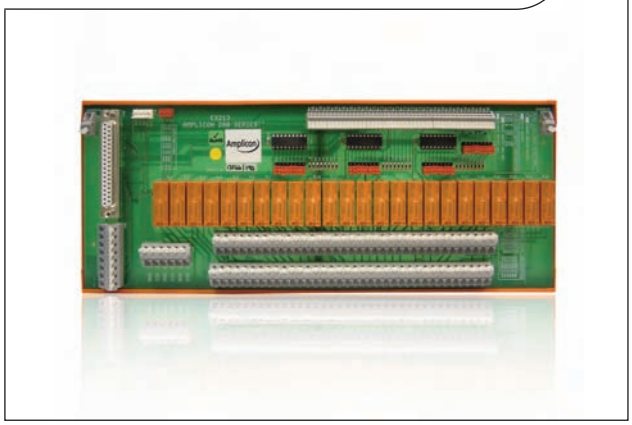


Specifications	
Opto-isolated low range	Low or '0': -5.0 to +1.5V High or '1': +4 to +20V
Opto-isolated high range	Low or '0': -15 to 2.0V High or '1': +10 to +50V
Volt free contact	Low or '0': -1.0 to +1.5V High or '1': +2.0 to +5.0V
Wiring termination	Spring loaded terminals
Connector	37-way female D-sub
Dimensions	320 x 126 x 42mm (width x depth x height)

Ordering information

90966373 EX230 input panel, 24 isolated common & contact closure inputs
91014890 ACL-10137-1 MF Screened cable, 37-way male D to female D

EX213 Relay / isolated outputs



Specifications	
Number of relays	24 SPDT
Contact rating	30Vdc or 49Vac @ 8A
Opto-isolated output	Low or '0': +0.7V High or '1': +23V
Non-isolated outputs	TTL on Port A only, selectable
Max current source	100mA/ channel for 90% duty
Wiring termination	Spring loaded terminals
Connector	37-way female D-sub
Dimensions	320 x 126 x 42mm (width x depth x height)
Power requirements	24Vdc

Ordering information

90966363 EX213 output panel with 24 relays/isolated logic
91014890 ACL-10137-1 MF Screened cable, 37-way male D to female D